

Appl. No. 10/683,764
Amdt. dated Sep. 9, 2005
Reply to Office action of Mar. 9, 2005

Amendments to the Specification:

Please replace paragraph [0022] with the following rewritten paragraph:

[0022] Referring also to Fig. 2, in one embodiment, step 104 (Fig. 1) may be a multi-step process beginning at step 112, where a conductive or anti-static material is applied proximate to the substrate. The conductive or anti-static material may include a liquid, solid, gas, or plasma. For example, the conductive or anti-static material may be an aqueous or nonaqueous solution of the salts of organic acids, amines, organic sulfonic acids, and/or organic phosphates. The conductive or antistatic material may be a fatty amine salt such as Cocoalkylmethylbis (2-hydroxyethyl) ammonium chloride, sold as ~~Ethequad~~[®] ETHOQUAD[®] C/12 (Akzo Nobel). These materials provide ionic species which can easily implant or diffuse into wood or wood composite substrates and have boiling points higher than the process temperatures of the pre-heating step 106, thereby remaining implanted in the substrate upon thermal cycling. Another class of antistatic materials that may be used are high-boiling amines such as polyoxyethylene (15) cocoalkylamines, sold as ~~Ethomeen~~[®] ETHOMEEN[®] C/25(Akzo Nobel). These compounds, chosen to possess chemical structures capable of mimicking the action of moisture naturally present in the substrate, are also notable for the ease with which they are implanted within a porous lignocellulosic substrate. Furthermore, the conductive or antistatic material can be chosen to have a lower boiling point than the process temperature of the steps 106, 108, and 110. Therefore, no change in the electrical conductivity may be lost during the application of any subsequent process that may require an elevated temperature applied to the substrate. The aqueous or non-aqueous solution of conductive material comprising Cocoalkylmethylbis(2-hydroxyethyl) ammonium chloride or polyoxyethylene (15) cocoalkylamines may be applied by any technique such as spraying, dipping, brushing, or vapor deposition. The aqueous or non-aqueous solution may be placed upon the substrate and allowed to implant into the substrate surface. The aqueous or non-aqueous solution may or may not penetrate the entire depth of the substrate, and any excess may be removed from the surface of the

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substrate by mechanical wiping, cleaning, inert gas or air flow, and/or application of another liquid.